

Appl. No. 10/644,235
Amtd. dated February 28, 2007
Reply to Office Action of November 29, 2006

Amendments to the Drawings:

Included in the amendment are an "Annotated Sheet Showing Changes" and a "Replacement Sheet" for Figs. 1 and 7. In both figures, appropriate legends have been added to the blank boxes in the drawings.

Appl. No. 10/644,235
Amdt. dated February 28, 2007
Reply to Office Action of November 29, 2006

Remarks

The present amendment responds to the Official Action dated November 29, 2006. The Official Action objected to the drawings. The Official Action objected to claim 25. The Official Action rejected claims 2, 11, 12, 16, 22, and 24 under 35 U.S.C. 112. The Official Action rejected claims 1, 4-9, 15, and 18-21 under 35 U.S.C. 102(b) based on Fatehi U.S. Patent No. 4,878,726 ("Fatehi"). The Official Action rejected claims 2, 10-12, 14, 16, and 22-24 under 35 U.S.C. 103(a) based on Fatehi in view of Ono U.S. Patent No. 6,388,786 ("Ono"). The Official Action rejected claims 3, 7, 13, and 25 under 35 U.S.C. 103(a) based on Fatehi in view of Mizuhara U.S. Patent No. 6,535,316 ("Mizuhara"). The Official Action provisionally rejected claims 1, 3, 5, 8, 15, 17, 21, and 25 on the ground of obviousness type double patenting over claims 1, 2, 8, 9, and 14 of copending U.S. Patent Application Serial No. 10/245,029. The Official Action provisionally rejected claims 1, 3, 5, 8, 15, 17, 21, and 25 on the ground of obviousness type double patenting over claims 1, 2, 8, 9, 10, and 14 of copending U.S. Patent Application Serial No. 10/245,029 in view of Klarquist U.S. Publication No. 2004/0202481 ("Klarquist"). These objections and grounds of rejection are addressed below. Revised drawing sheets are submitted herewith. Claims 1, 2, 11, 12, 15, 16, 22, 24 and 25 have been amended to be more clear and distinct. Claims 1-25 are presently pending.

The Objection to the Drawings

Appl. No. 10/644,235
Amdt. dated February 28, 2007
Reply to Office Action of November 29, 2006

The Official Action objected to Figs. 1 and 7 as including insufficient detail. Revised drawing sheets are submitted herewith. With these revisions, the objection to the drawings has been overcome.

The Objection to Claim 25

The Official Action objected to claim 25. This claim has been amended to address the objection. The objection to claim 25 should therefore be withdrawn.

The 112 Rejections

The Official Action rejected claims 2, 11, 12, 16, 22, and 24 under 35 U.S.C. 112. These claims have been amended to address this ground of rejection. The 112 rejections should therefore be withdrawn.

The Art Rejections

As addressed in greater detail below, Fatehi, Ono, and Mizuhara do not support the Official Action's reading of them and the rejections based thereupon should be reconsidered and withdrawn. Further, the Applicant does not acquiesce in the analysis of Fatehi, Ono, and Mizuhara made by the Official Action and respectfully traverses the Official Action's analysis underlying its rejections.

The Official Action rejected claims 1, 4-9, 15, and 18-21 under 35 U.S.C. 102(b) based on Fatehi U.S. Patent No. 4,878,726 ("Fatehi"). In light of the present amendments to claims 1 and 15, this ground of rejection is respectfully traversed.

Claim 1, as amended, addresses modulating first and second beams of continuous wave electromagnetic radiation with a source signal so that the first and second beams combine to

Appl. No. 10/644,235
Amdt. dated February 28, 2007
Reply to Office Action of November 29, 2006

produce streams of asserted and unasserted data bits, and assembly of modulated portions of the first and second beams into a first and second electromagnetic radiation signal of interposed regular and alternate data bit sequences comprising asserted non return to zero coded data bits. These limitations in the claimed combination are not taught and are not made obvious by Fatehi.

Fatehi teaches a transmission system using a single transmitter producing two optical outputs, including an original signal comprising a digital optical output, and a second signal which is the complement of the original signal. The signals are routed along two separate optical paths to a switch, which normally selects the original signal as the optical output of the switch. When the absence of the original signal, or an excessive error rate, is detected, indicating a failure of the transmission path carrying the original signal, the switch selects the second signal for use as the optical output of the switch. The complement signal can be processed in order to provide the information content of the original signal.

The present invention, as claimed by claim 1, by contrast, combines first and second modulated signals so as to produce streams of asserted and unasserted data bits. Fatehi does not teach and does not make obvious such combination of first and second modulated signals. Through the use of appropriate combinations of signals, the invention of claim 1 allows for a response to failure of an optical transmission path based on the absence of one of the signals and the response of the combined signal to that absence. The need for detection of a change in signals and taking of action in response to such detection is therefore reduced. Claim 1, as amended, therefore defines over the cited art and should be allowed.

Appl. No. 10/644,235
Amdt. dated February 28, 2007
Reply to Office Action of November 29, 2006

Claim 15, as amended, includes limitations similar to those of claim 1. For the reasons stated above with respect to claim 1, Fatehi does not teach or make obvious the limitations of claim 15. Claim 15, as amended, therefore defines over the cited art and should be allowed.

The Official Action rejected claims 2, 10-12, 14, 16, and 22-24 under 35 U.S.C. 103(a) based on Fatehi in view of Ono U.S. Patent No. 6,388,786 ("Ono"). Claims 2, 10-12, and 14 are dependent claims having claim 1 as a base claim and claims 16 and 22-24 are dependent claims having claim 15 as a base claim. Because claims 1 and 15 have been shown to be allowable, claims 2, 10-12, 14, 16, and 22-24 should also be allowed.

The Official Action rejected claims 3, 7, 13, and 25 under 35 U.S.C. 103(a) based on Fatehi in view of Mizuhara U.S. Patent No. 6,535,316 ("Mizuhara"). Claims 3, 7, and 13 are dependent claims having claim 1 as a base claim and claim 25 is a dependent claim having claim 15 as a base claim. Because claims 1 and 15 have been shown to be allowable, claims 3, 7, and 13 should also be allowed.

The Double Patenting Rejections

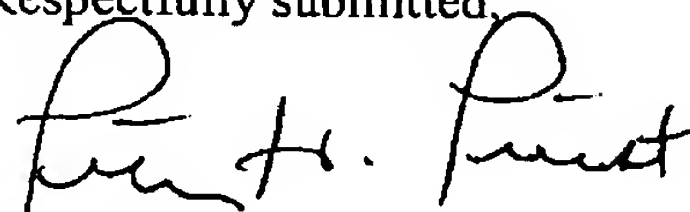
The Official Action provisionally rejected claims 1, 3, 5, 8, 15, 17, 21, and 25 on the ground of obviousness type double patenting over specified claims of U.S. Application Serial No. 10/245,029, standing alone, or in combination with Klarquist. A terminal disclaimer is submitted herewith. The provisional double patenting rejections should therefore be withdrawn.

Appl. No. 10/644,235
Amdt. dated February 28, 2007
Reply to Office Action of November 29, 2006

Conclusion

All of the presently pending claims, as amended, appearing to define over the applied references, withdrawal of the present rejection and prompt allowance are requested.

Respectfully submitted,



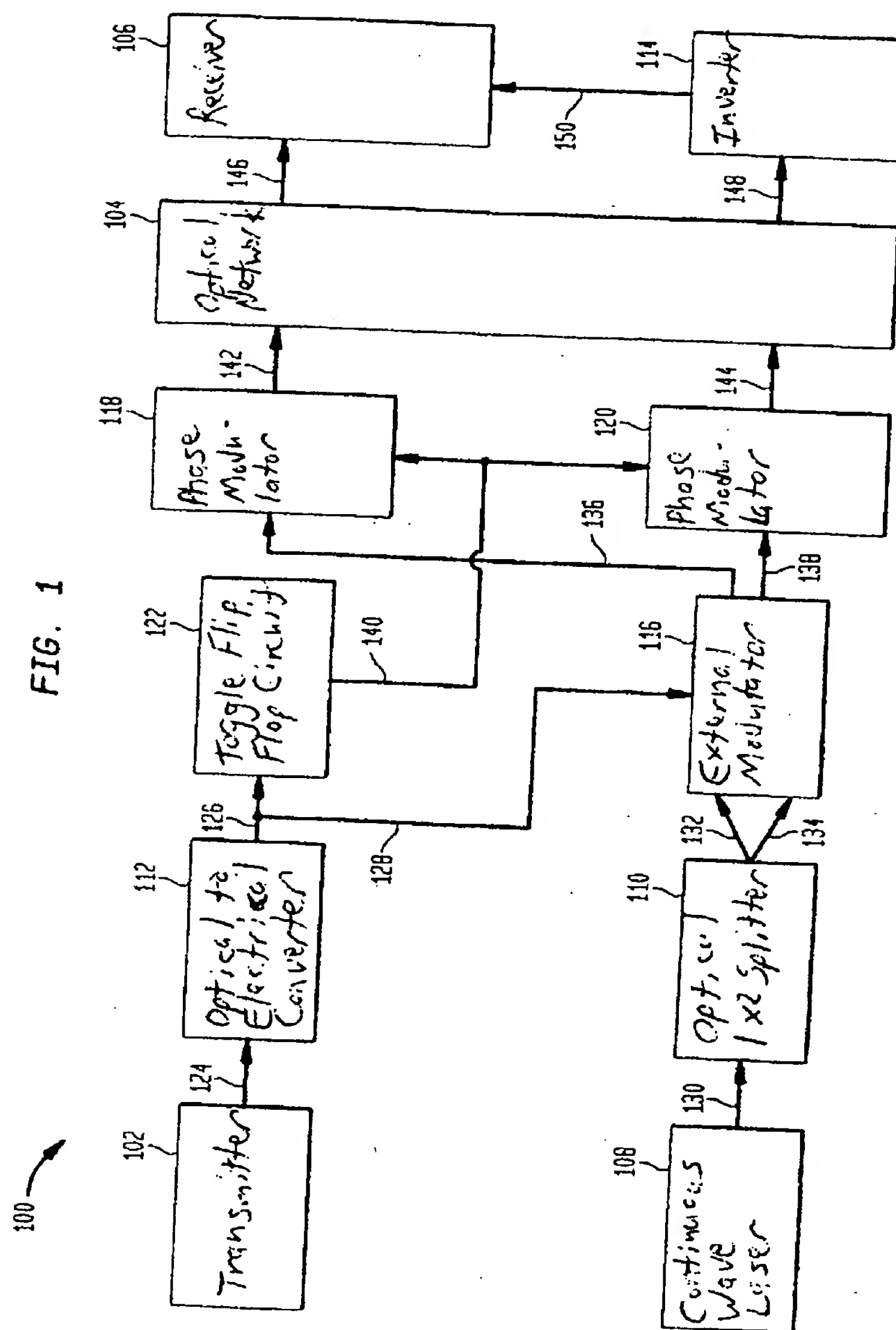
Peter H. Priest
Reg. No. 30,210
Priest & Goldstein, PLLC
5015 Southpark Drive, Suite 230
Durham, NC 27713-7736
(919) 806-1600

ANNOTATED SHEET SHOWING CHANGES

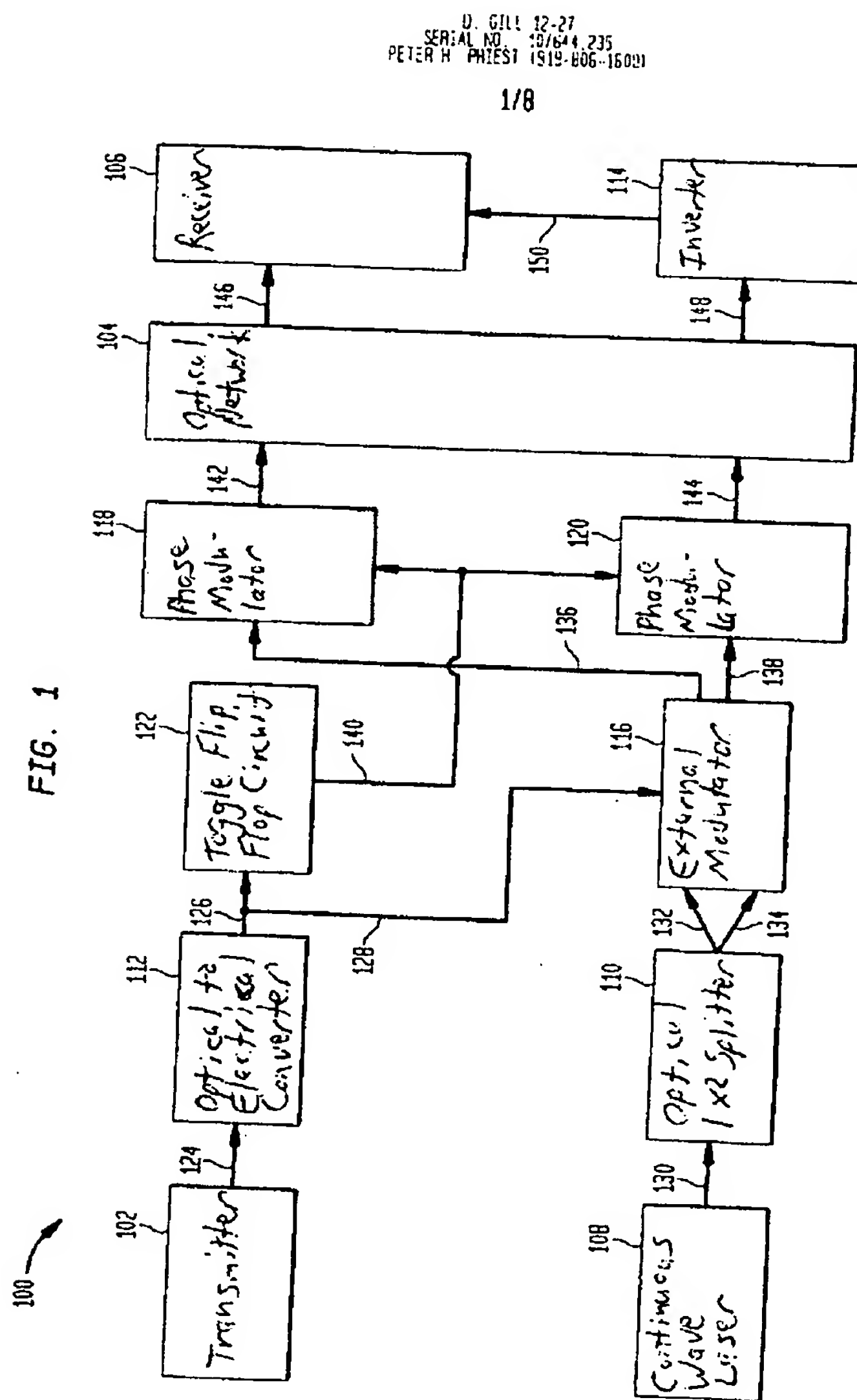
U. GILL 12-27
SERIAL NO. 191644-235
PETER H. PRIEST (1919-806-1500)

1/8

FIG. 1



ANNOTATED SHEET SHOWING CHANGES



**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☒ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.